

Clean Cold Power TRU Specifications



Cooling performance standby	Dearman Engine® powered	Electric
35°F	60,000 BTU	22,500 BTU
-0°F	48,000 BTU	22,500 BTU
-20°F	38,000 BTU	22,500 BTU

at 100 °F ambient

Electric standby system	
Voltage - Phase - Frequency	120v single phase to 480v 3 phase 50/60Hz
Supply current rating	30 A (60 A option)
Connection	5-pin - front panel mounted
Functions	Automatic detection; Phase correction

Noise
Designed for 60dB(A) Piek compliance without reduced cooling

Liquid nitrogen (LN ₂) system	
LN ₂ tank	130, 200 or 250 gallons stainless steel, vacuum insulated (492, 757, or 946 liters)
LN ₂ tank pressure	1.8 bar(g) working pressure, 5 bar(g) relief valve
LN ₂ pump	Close-coupled tank mount with pre-cooled pump head
Pump performance	4.4 lbs /min @ 650 psi
Pump drive	Fast start 24 V electric drive

Vapour compression cycle refrigeration system	
Refrigerant	Low charge mass R452a (from 8 pounds) (GWP 2140, ULETRU compliant)
Condenser	Low temperature liquid cooled brazed plate heat exchanger for high vapour cycle efficiency
Compressor	Low maintenance 19.1 in ³ swash plate compressor, 1000 rpm operation
Drive belt	6 rib V belt

CARB Ultra Low Emissions Transport Refrigeration Unit (ULETRU) Ready	
Particulate Matter	Zero
Nitrogen Oxides	Zero
Point-of-use CO ₂ e	Zero

Evaporators	Main	Remote
Airflow rate	1,854 cfm EcoFlow	1,295 cfm EcoFlow
Air flow distribution	Single discharge	Dual discharge
Defrost	Integrated defrost coil	

Temperature control	
Set-point range	-20°F to 59°F
Deadband	+/- 3.6°F, adjustable between +/-1.8°F and +/-12°F
Compartments	Single or dual temperature controlled

Oxygen monitoring system	
Sensor	Fluorescent type sensor, one per compartment
Low oxygen threshold	18%
Status and warnings	Audible alarms and LED status lights
Status reporting	Via HMI and Data acquisition

Controller and data collection	
User interface	Intuitive graphical user interface via 5 push-button control and 4-inch colour LCD screen. Configurable temperature pre-sets Day and night mode. Panel-mounted on main unit enclosure.
Data collection	Compartment air temperatures, system status and operational data. 4G data upload, cloud data storage.
Tracking	GPS
Data management + analytics	Optional web or mobile app

Electrical system	
Voltage	24 V DC
Battery capacity	90 Ah
Battery technology	AGM
Aux battery charging port	Option, customer specified connector
Solar PV charging back-up	200 W standard
Alternator	150A

Fluids	
Engine oil	0w-40 - 1 qt
Heat exchange fluid	Propylene Glycol based - 16 gallons
Defrost fluid	Ethylene Glycol based - 8 gallons
Refrigerant	R452a (GWP 2140, ULETRU compliant)

Dimensions	Mass	
Front mount unit	W 80.7" x H 87.8" x D 17.1"	1670 lb
LN ₂ tank - 130 gal (492L)	L90" x Dia 27.3"	775 lbs (empty) 1774 lbs (full)
Remote evaporator	W 28.5" x L 39.6" x D 8"	112 lbs

Trailer integration	
LN ₂ refuel access	Specify left or right side of trailer
LN ₂ refuel connections	Dry-break quick-connection, vacuum insulated hose
Available load	Up to 26 US pallets in 53ft trailer
Air guides	Optional
Industry standard mountings	
LN ₂ tank mounted centrally or off-set to customer specification	

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